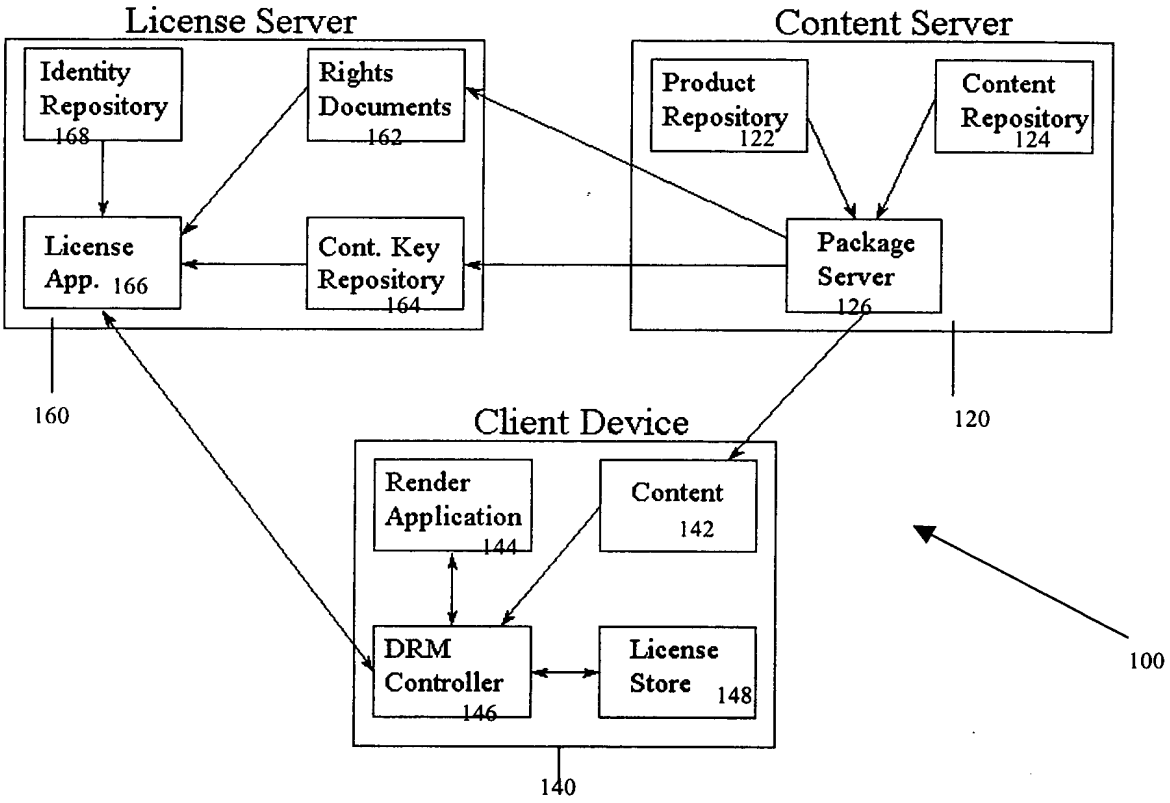
License Server
Identity Repository 168
Rights Documents 162
License App. 166
Cont. Key Repository 164
160
Content Server
Product Repository 122
Content Repository 124
Package Server 126
120
Client Device
Render Application 144
Content 142
DRM Controller 146
License Store 148
140
100

Figure 1

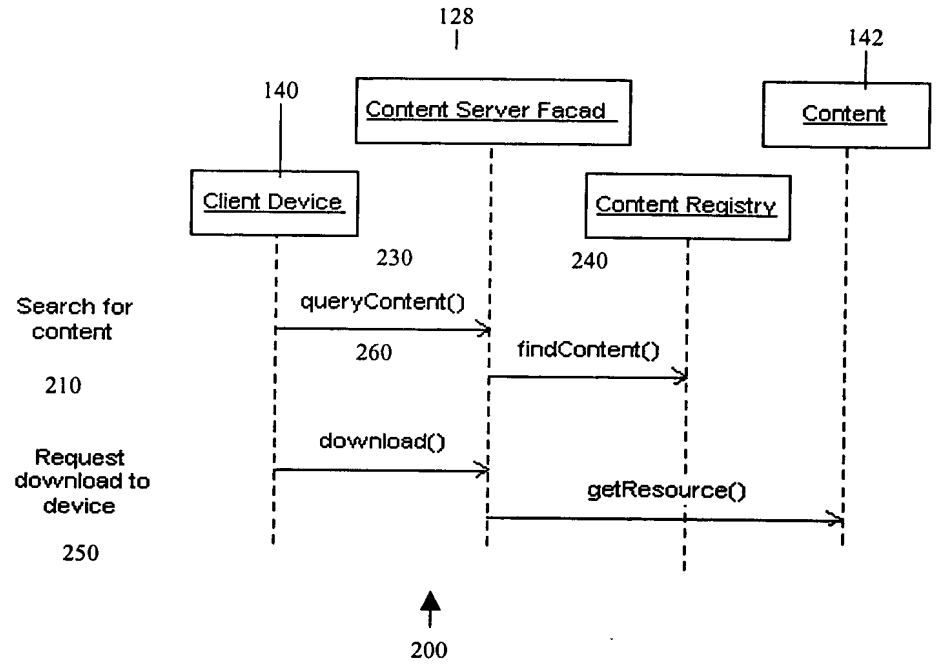
128
142
140
Content Server Facad
Content
Client Device
Content Registry
230
240
Search for content
queryContent()
260
findContent()
210
download()
Request download to device
getResource()
250
200

Figure 2

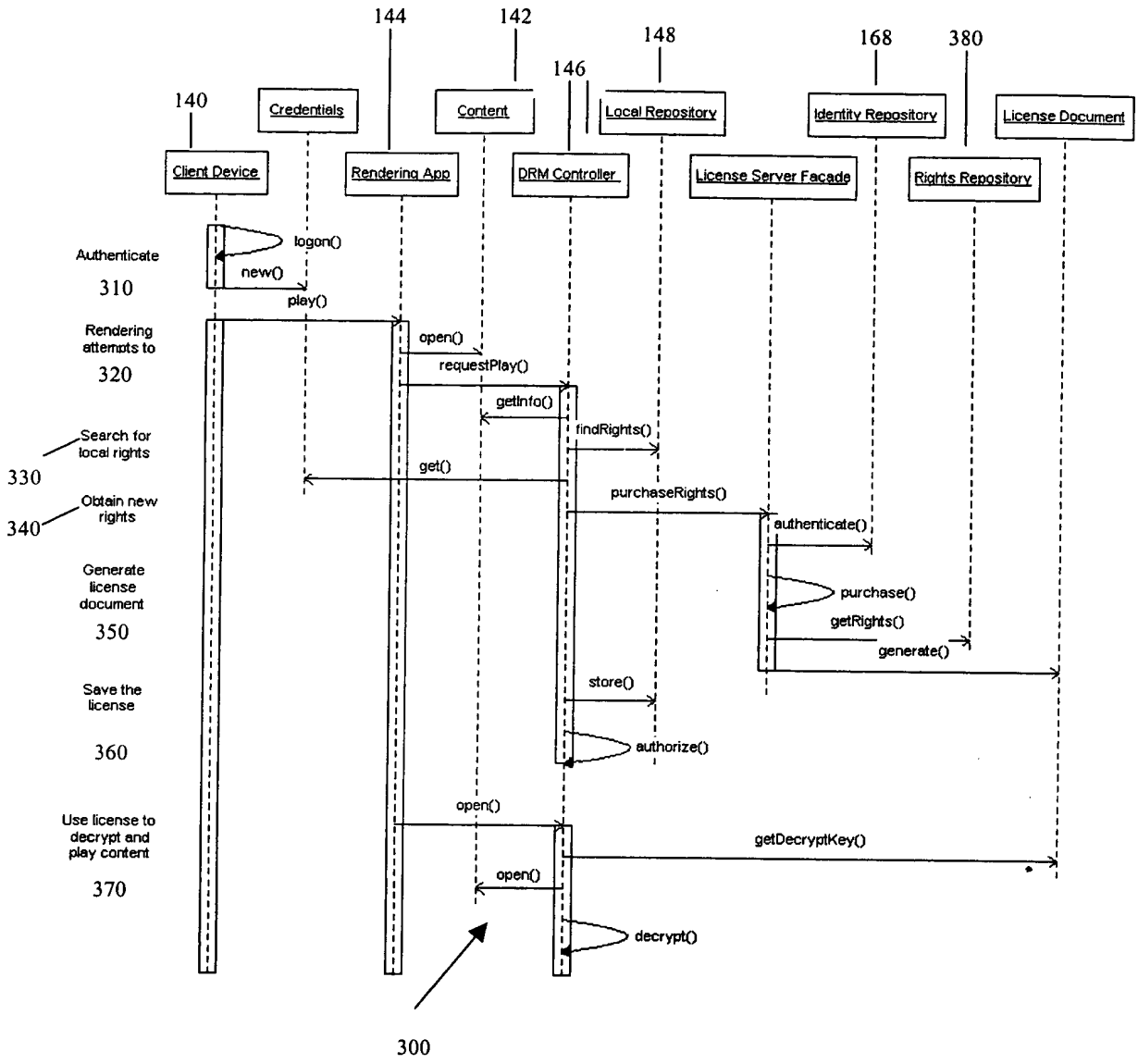
140
Credentials
144
142
Content
146
148
Local Repository
168
Identity Repository
380
License Document
Client Device
Rendering App
DRM Controller
License Server Facade
Rights Repository
Authenticate
310
logon()
new()
play()
Rendering attempts to
320
open()
requestPlay()
getInfo()
findRights()
Search for local rights
330
get()
Obtain new rights
340
purchaseRights()
authenticate()
Generate license document
350
purchase()
getRights()
generate()
Save the license
360
store()
authorize()
Use license to decrypt and play content
370
open()
getDecryptKey()
open()
decrypt()
300

Figure 3

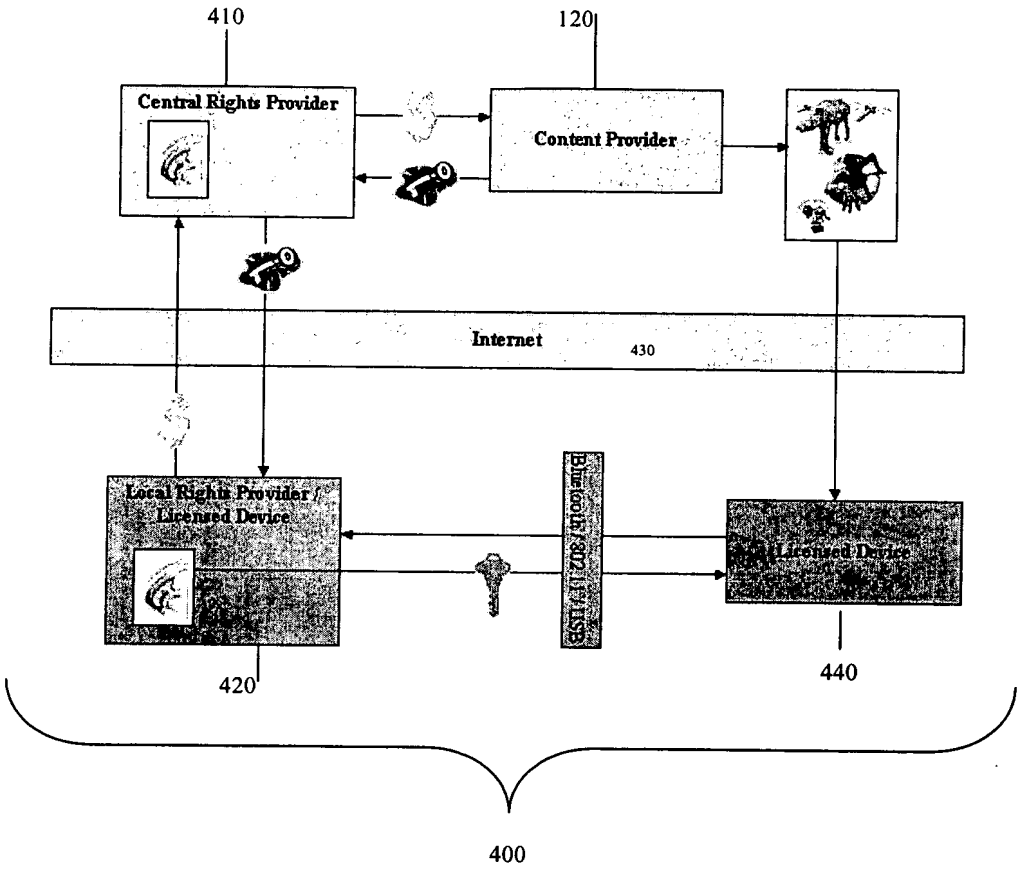
410
120
Central Rights Provider
Content Provider
Internet
430
Local Rights Provider / Licensed Device
Bluetooth / 802.11 / GSM
420
440
400

Figure 4

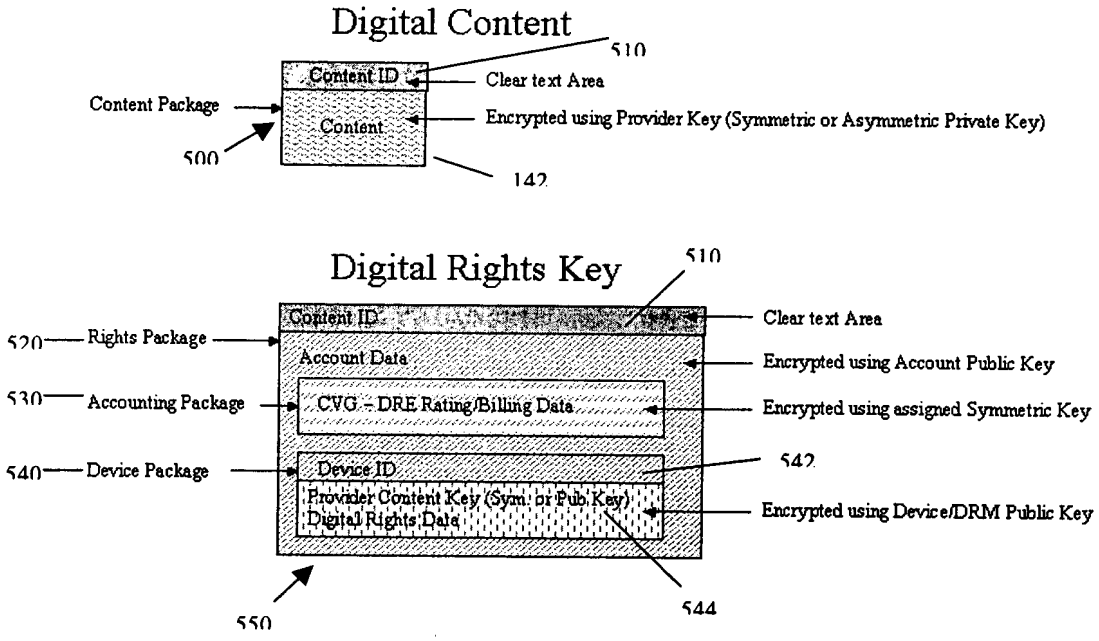
Digital Content
510
Content ID
Clear text Area
Content Package
Content
Encrypted using Provider Key (Symmetric or Asymmetric Private Key)
500
142
Digital Rights Key
510
Content ID
Clear text Area
520
Rights Package
Account Data
Encrypted using Account Public Key
530
Accounting Package
CVG - DRE Rating/Billing Data
Encrypted using assigned Symmetric Key
540
Device Package
542
Device ID
Provider Content Key (Sym. or Pub. Key)
Digital Rights Data
Encrypted using Device/DRM Public Key
544
550

Figure 5

Key Name	Key Type	Generated By / When	Provided To	Purpose
Device Key	Asym	SC Manufacturer Signed by CA / Smart Card Personalization	LRP (Certificate Only)	- Register Device to LRP - Encrypt / Sign messages with LRP - Access Device Package
LRP Key	Asym	SC Manufacturer Signed by CA / Smart Card Personalization	CRP (Certificate Only)	- Register Device to CRP - Encrypt / Sign messages with CRP
DBR Key	Sym	CRP or DBR System / Account Sign-Up	LRP LRP distributes to other Consumer Devices	- Encryption processing of DBR state data in FDR Key
Account Key	Sym	CRP / Account Sign-Up	LRP LRP distributes to other Consumer Devices	- Encryption processing of FRM Keys
Content Key	Any	Content Provider / Pre-release of content	CRP CRP distributes to LRP, LRP packages into FRM Key	- Decrypt digital content
FRM Key	N/A	LRP / After purchase of content and Content Key provided by CRP	Registered Devices	- Wrapping Content Key requiring correct Account Key, DRE Key and Private Device Key to access Content Key

Figure 6

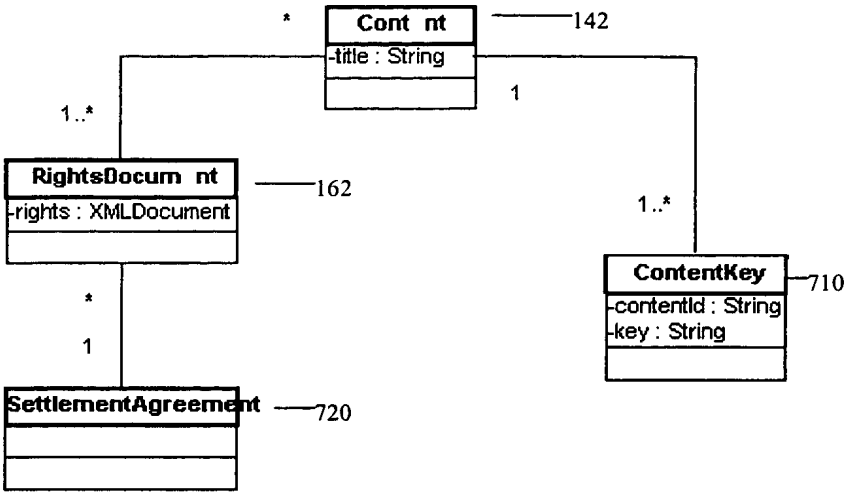
Cont nt
-title : String
142
*
1
1..*
RightsDocum nt
-rights : XMLDocument
162
1..*
ContentKey
-contentId : String
-key : String
710
*
1
SettlementAgreement
720

Figure 7

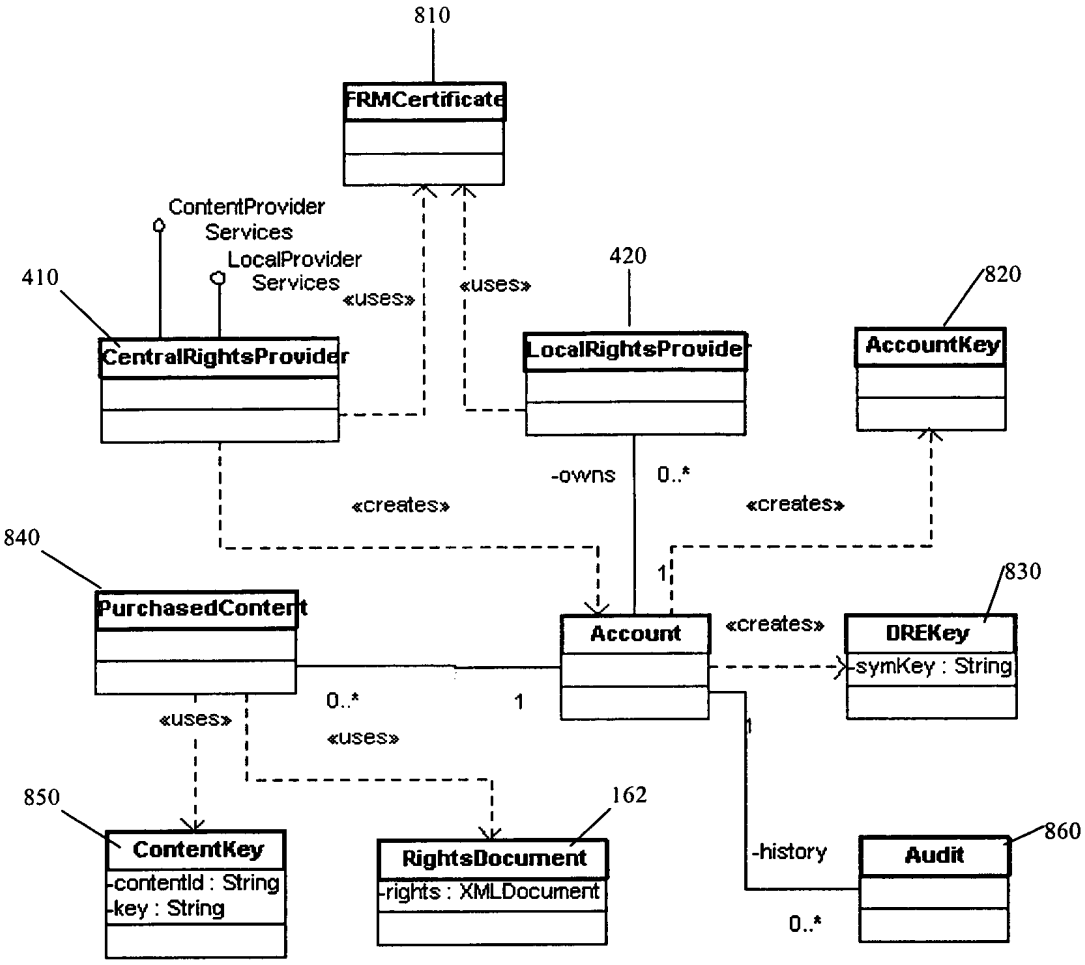
810
FRMCertificate
ContentProvider Services
LocalProvider Services
410
«uses»
«uses»
420
820
CentralRightsProvider
LocalRightsProvide
AccountKey
-owns
0..*
«creates»
«creates»
840
1
830
PurchasedConten
Account
«creates»
DREKey
-symKey : String
0..*
1
«uses»
«uses»
1
850
162
860
ContentKey
-contentId : String
-key : String
RightsDocument
-rights : XMLDocument
-history
Audit
0..*

Figure 8

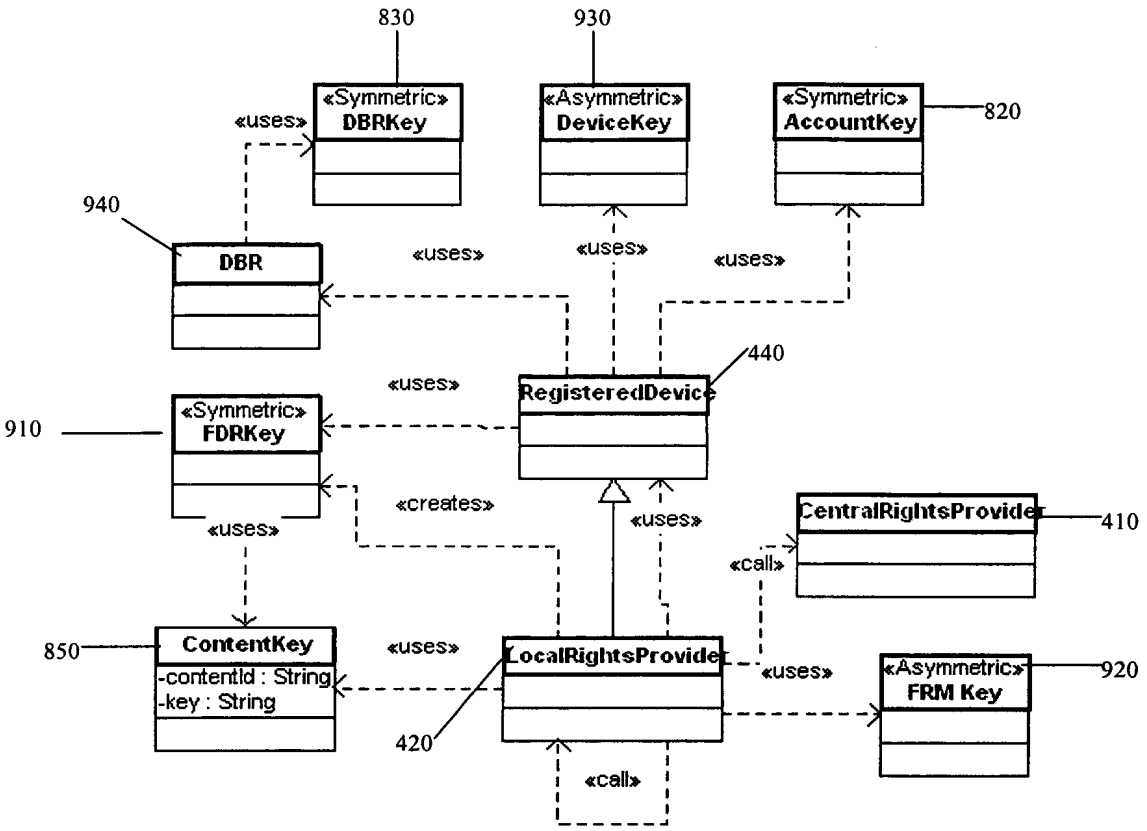
830
930
«Symmetric»
DBRKey
«Asymmetric»
DeviceKey
«Symmetric»
AccountKey
820
«uses»
940
DBR
«uses»
«uses»
«uses»
440
«uses»
RegisteredDevice
910
«Symmetric»
FDRKey
«creates»
«uses»
«uses»
CentralRightsProvider
410
«call»
850
ContentKey
-contentId : String
-key : String
«uses»
LocalRightsProvider
«uses»
«Asymmetric»
FRM Key
920
420
«call»

Figure 9